

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1 – 91 (canceled).

92. (previously presented) A method, comprising:

- a) generating a ring signal at a remote telephone interface and starting a timer that measures a time period over which said ring signal is applied at said remote telephone interface, said generating a ring signal and said starting a timer both a consequence of a connection that was established toward said remote telephone interface over a packet data network in order to place a call through said remote telephone interface;
- b) ceasing said ring signal and sending a message in response to said timer expiring, said sending a message further comprising sending said message over said packet data network to a system that initiated said connection, said system having initiated said connection in response to a ring signal observed at a telephone interface maintained by said system; and
- c) creating an “on-hook” signal at said telephone interface maintained by said system as a consequence of said system having received said message.

93. (previously presented) The method of claim 92 further wherein said timer lasts within a range of 2 to 3 minutes inclusive.

94. (previously presented) The method of claim 92 wherein said packet data network further comprises an Internet Protocol (IP) network.

95. (previously presented) The method of claim 92 wherein said packet data network further comprises a Frame Relay network.

96. (previously presented) The method of claim 92 wherein said packet data network further comprises a High level Data Link Control (HDLC) network.

97. (previously presented) The method of claim 92 wherein said packet data network further comprises an Asynchronous Transfer Mode (ATM) network.

98. (previously presented) The method of claim 92 wherein said remote telephone interface resides at a PBX.

99. (previously presented) The method of claim 92 wherein said remote telephone interface reside at a central office (CO).

100. (previously presented) An apparatus, comprising:

- a) means for providing a ring signal at a remote telephone interface as consequence of a connection that was established toward said remote telephone interface over a packet data network;
- b) timer means that measures a time period over which said ring signal is applied at said remote telephone interface;

c) means for ceasing said ring signal, said ceasing in response to said timer expiring;

d) means for sending a message, in response to said timer expiring, over said packet data network to a system that initiated said connection, said system having initiated said connection in response to a ring signal observed at a telephone interface; and

e) means for providing an “on-hook” signal at said telephone interface as a consequence of said message having been received by said system.

101. (previously presented) The apparatus of claim 100 wherein said timer lasts within a range of 2 to 3 minutes inclusive.

102. (previously presented) The apparatus of claim 100 wherein said packet data network further comprises an Internet Protocol (IP) network.

103. (previously presented) The apparatus of claim 100 wherein said packet data network further comprises a Frame Relay network.

104. (previously presented) The apparatus of claim 100 wherein said packet data network further comprises a High level Data Link Control (HDLC) network.

105. (previously presented) The method of claim 100 wherein said packet data network further comprises an Asynchronous Transfer Mode (ATM) network.

106. (previously presented) The method of claim 100 wherein said remote telephone interface resides at a PBX.

107. (previously presented) The method of claim 92 wherein said remote telephone interface reside at a central office (CO).

108. (currently amended) An apparatus, comprising:

a first system communicatively coupled to a second system through a packet network;

said first system comprising:

a) a timer, said timer to measure a time period over which a ring signal is applied;

b) a telephone interface where said ring signal is generated;

c) a first interface to said packet network, said first interface from where a message is sent from said first system to said second system if said timer expires;

said second system comprising:

a) a second interface to said packet network, said second interface where said message is received;

b) a third interface that transitions from an off hook state to an on hook state in response to said message being received.

109. (previously presented) The apparatus of claim 108 where said second system further comprises a VOPS control system communicatively coupled to said second interface and said interface.

110. (previously presented) The apparatus of claim 108 wherein said third interface is a PBX interface.

111. (previously presented) The apparatus of claim 108 wherein said third interface is a CO interface.

112. (previously presented) The apparatus of claim 108 wherein said third interface is a PSTN interface.

113. (previously presented) The apparatus of claim 108 wherein said timer is a configurable timer.

114. (previously presented) The apparatus of claim 108 wherein said timer is a fixed timer.

115. (previously presented) The apparatus of claim 108 wherein said packet network further comprises an Internet Protocol (IP) network.

116. (previously presented) The apparatus of claim 108 wherein said packet network further comprises a Frame Relay network.

117. (previously presented) The apparatus of claim 108 wherein said packet data network further comprises a High level Data Link Control (HDLC) network.

118. (previously presented) The apparatus of claim 108 wherein said packet data network further comprises an Asynchronous Transfer Mode (ATM) network.

119. (previously presented) The apparatus of claim 108 wherein said second system is a multiservice access concentrator (MAC) capable of:

receiving at least one data stream and at least one voice channel;

packetizing said received at least one data stream and packetizing

said at least one voice channel;

multiplexing said packetized at least one data stream and said

packetized at least one voice channel into a transport stream; and,

providing said transport stream to said packet network using a

configurable trunk

wherein, said MAC comprises a CPU communicatively coupled to a plurality of ports, said ports from where said data stream and voice channel are said received and from where said transport stream is said provided, said CPU coupled to memory.

Claims 120 – 130 (canceled).

131. (previously presented ) A computer readable medium containing executable instructions which when executed in a processing system, causes the system to perform a method, the method comprising:

a) causing an off hook signal to be generated at a telephony interface in response to a ring signal having been detected at said telephony interface, said ring signal for a call that is attempting to be established through said telephony interface and a packet network to a remote location, where, said packet network resides between said telephony interface and said remote location

and

generating a communication over said packet network to cause said remote location to recognize said attempting; and,

b) causing said telephony interface to replace said off said hook signal with a signal indicative of an on hook or idle state in response to a message having been received from said network that indicates said attempting should be terminated.

132. (previously presented) The computer readable medium of claim 131 wherein said telephony interface can receive said ring signal from a PBX.

133. (previously presented) The computer readable medium of claim 131 wherein said telephony interface can receive said ring signal from a CO.

134. (previously presented) The computer readable medium of claim 131 wherein said telephony interface can receive said ring signal from a PSTN.

135. (previously presented) The computer readable medium of claim 131 wherein said packet network further comprises an Internet Protocol (IP) network.

136. (previously presented) The computer readable medium of claim 131 wherein said packet network further comprises a Frame Relay network.

137. (previously presented) The computer readable medium of claim 131 wherein said packet data network further comprises a High level Data Link Control (HDLC) network.

138. (previously presented) The computer readable medium of claim 131 wherein said packet data network further comprises an Asynchronous Transfer Mode (ATM) network.

139. (previously presented) The computer readable medium of claim 131 wherein said generating a communication over said packet network further comprises causing a connection to be created over said remote location through said packet network.

140. (previously presented) The computer readable medium of claim 131 wherein said method further comprises identifying said remote location as the destination of said call by way of:

interaction with the caller of said call by presenting said caller with a secondary dial tone and collecting DTMF digits from said caller;  
or,  
automatically based upon the fact that said ring signal was detected at said particular telephony interface.

141. (previously presented) The computer readable medium of claim 131 wherein said method further comprises handling another call over said telephony interface after said replacement because said telephony interface was made available by said replacement.

Claims 142 – 160. (canceled)

161. (new) A method, comprising:

- a) receiving a first ring signal at a first telephone interface, said first ring signal in response to an attempt to place a call to a second telephone interface;
- b) responding to said ring signal by applying an off-hook signal at said first telephone interface and establishing a connection toward said second telephone interface over a packet data network;

c) generating a second ring signal at said second telephone interface and starting a timer;

d) responding to said timer expiring by ceasing said ring signal and sending a message over said packet data network; and,

e) receiving said message and responding to said receiving by generating an on-hook signal at said telephone interface.

162. (new) The method of claim 161 further wherein said timer lasts within a range of 2 to 3 minutes inclusive.

163. (new) The method of claim 161 wherein said packet data network further comprises an Internet Protocol (IP) network.

164. (new) The method of claim 161 wherein said packet data network further comprises a Frame Relay network.

165. (new) The method of claim 161 wherein said packet data network further comprises a High level Data Link Control (HDLC) network.

166. (new) The method of claim 161 wherein said packet data network further comprises an Asynchronous Transfer Mode (ATM) network.

167. (new) The method of claim 161 wherein said remote telephone interface resides at a PBX.

168. (new) The method of claim 161 wherein said remote telephone interface  
reside at a central office (CO).